

ETH 240

Techniques in Advanced Server Load Balancing

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The ETH 240 course is an in-depth study of server load balancing using Foundry Networks' ServerIron products. The course focuses in on advanced techniques of implementing Server Load Balancing (SLB) in a variety of network topologies. It includes an intense study of SLB theory of operations, configuration, network design and troubleshooting. The course is labs (hands-on) intensive and as result is fast moving. Key topics include but are not limited to; Load Balancing, Global Server Load Balancing, Transparent Cache Switching and Layer 7 switching.

Course Contents

- Overview – Review
- Server Load Balancing
- Health Check
- Layer 7 Switching
- Global Server Load Balancing
- Transparent Cache Switching
- ServerIron Security
- Troubleshooting

Target Group

- Customers or Resellers are experienced with Foundry Networks Products
- Network technicians with installation configuration, and troubleshooting experience with Foundry Products
- Network Administrators responsible for implementing layer 4 through layer 7 network solutions.
- Network support staff that will act as network device installers and first-line support for a local to global sized business environment.

Knowledge Prerequisites

To fully benefit from this course you should attended the ETH 103 - Basic Switch/ Router Configuration and Management and the ETH 202 - Introduction to Web Switching & Load Balancing courses. It is also recommended that you have previous exposure to general network management issues in a Foundry Networks environment. A working knowledge of Foundry Networks' CLI is a must.

Course Objectives

After completing this course, the student will be able to:

- Identify key SLB techniques available using the Foundry Networks ServerIron
- Implement advanced designs and configurations in Server Load Balancing
- Implement advanced SLB, Health Checks and Layer 7 switching features on the Foundry ServerIron products
- Tune the Foundry Networks SLB implementation for fast Active-Active failover
- Determine the appropriate SLB design for a given network requirement
- Interconnect Foundry L2/L3 Switch Routers with the Foundry L4-7 Severlron based on a network design
- Troubleshoot the in class design implementations using the CLI show commands

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Reservation and Registration

We will be glad to make a free and non-binding course reservation for you for the duration of two weeks. On www.experteach-benelux.com under *Registration*, you can conveniently make course reservations, registrations, and hotel reservations. Alternatively, call us under +31 (0)76 52 32 950.

For closed groups of participants, we can modify the course contents according to your requirements. Do not hesitate to contact us!



ETH 240

3 days

€2,160 exclusive of V.A.T.

Course date (dd.mm.yy)/Location

Course dates available on request

Up-to-date information: www.experteach-benelux.com

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ETH 240 – Techniques in Advanced Server Load Balancing

Overview – Review

- Review basic SLB architecture
- Recognize Current Features in Layer 2 SLB
- Recognize Current Features Layer 3 SLB
- Describe Layer 7 switching Cookie/URL switching/hashing and cookie insertion
- Define the purpose of health check and types of health checks
- List security features SYN-Guard and SYN-Defense

Server Load Balancing

- Discuss L2 vs.L3 SLB option
- Barrel Processors - Dynamic Distribution
- Configure basic SLB as review/start point for more complex labs
- Configure primary and backup servers
- Configure SLB using VLANs with Virtual Routing Interfaces
- Configure OSPF for use in SLB with VRRP/E
- Setup multiple sub-nets and multiple virtual routing interfaces
- Configure SLB using NAT
- Configure Stateless TCP/UDP ports
- Describe the SLB session table
- Set SLB session table parameters
- Policy-based SLB

Health Check

- Describe how basic health-check works
- List the differences between active and passive health checks
- Configure Boolean health checks
- Develop Scripted health checks
- Implement scripted health checks

Layer 7 Switching

- Describe the difference in persistence using URL/Cookie switching and/or hashing.
- Use cookies for session persistence
- Describe Cookie insertion
- Insert a Cookie into an HTTP header using cookie switching and hashing

Global Server Load Balancing

- List the GSLB metrics and their function
- Describe and Configure Global Server Load Balancing with metrics set to different values
- List the advantages and disadvantages of the different GSLB options (including IP-Weight and Site-Weight)
- Describe and configure Route Health Injection for GSLB

Transparent Cache Switching

- List the key TCS design techniques
- Configure Active-Active TCS with a remote cache server
- Configure for proxy caching
- Configure TCS and SLB using the same ServerIron

ServerIron Security

- Security
- Discuss SYN-Guard/SYN-Defense.
- Configure SYN-Guard/SYN-Defense
- Describe the benefits of rate limiting
- URL Filtering
- Transaction Rate Limiting
- Connection Rate Limiting

Troubleshooting

- Use the sys-log to find problems
- Use the show command to solve data delivery problems
- BP Console commands
- Tracking Session Information



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